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SPECIAL DATA COLLECTION SYSTEM (SDCS) EVENT REPORT,
SOUTHERN SINKIANG PROVINCE, 27 OCTOBER 1975

K. J. Hill, et al

Teledyne Geotech

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13 January 1976

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SPECIAL DATA COLLECTION SYSTEM EVENT REPORT
Southern Sinkiang Province, 27 October 1975

K.J. Hill, M.S. Dawkins, R.R. Baumstark, and M.D. Gillispie
Alexandria Laboratories

Teledyne Geotech, 314 Montgomery Street, Alexandria, Virginia 22314

January 1976

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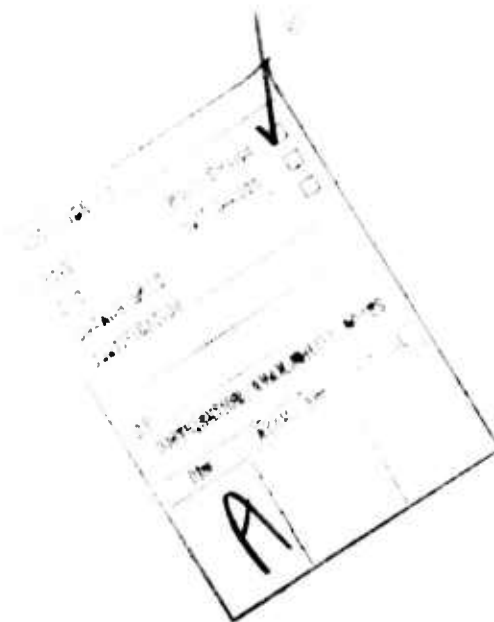
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| 20 ABSTRACT (Continue on reverse side if necessary and identify by block number) | | |

SDCS EVENT REPORT NO. 45

Southern Sinkiang Province, 27 October 1975

This event report contains seismic data from the Special Data Collection System (SDCS), and other sources for the above event. Published epicenter information from seismic observations is:

| | "P" Arrival | Origin Time | Lat. | Long. | m_b | M_s |
|--------|-------------|-------------|------|-------|-------|-------|
| NORSAR | 01:08:47.7 | 00:59:51 | 41 N | 089 E | 4.4 | N/A |

Using HN-ME, LASA and NORSAR, the epicenter location and magnitudes become

| | | | | |
|------------|-------|--------|-----|-----|
| 01:00:05.2 | 42.5N | 088.5E | 4.9 | N/A |
|------------|-------|--------|-----|-----|

All SDCS stations were operational during this period.

Short-period signals associated with this event were recorded at HN-ME, LASA and NORSAR. High-level background noise prevented determination of signal arrivals at WH2YK and RK-ON. Horizontal SP channels at WH2YK, FN-WV, HN-ME and CPSO were rotated. Rotation of horizontal SP channels at RK-ON could not be accomplished because the SP transverse channel was inoperative.

No long-period signals were recorded at the SDCS stations, ALPA, LASA and NORSAR. All SDCS stations had high level background motion. Horizontal LP channels at CPSO, FN-WV and WH2YK were rotated. Rotation of LP horizontal channels at HN-ME could not be accomplished because of unknown operating gain of the LP radial channel. At RK-ON horizontal LP channels were not rotated because the LP transverse channel was inoperative. Validity of the ALPA and NORSAR long-period vertical beams is uncertain. LASA long-period array data are recoverable in 6 minutes 40 seconds segment lengths; one segment is included in this report.

Scaling factors on plots are millimicrons at 1 Hz (not corrected for instrument response) with the exception of LASA and NORSAR short-period plots. LASA SP scaling factors are millimicrons per inch. Scaling factors are not reported for NORSAR short-period.

STATION DESCRIPTION

| SITE CODE | LOCATION | SITE COORDINATES | | ELEVATION METERS | INSTRUMENTATION | |
|--------------|----------------------------|------------------|---------|---------------------|-----------------|-------------|
| | | DEG | MN SECS | | SHORT-PERIOD | LONG-PERIOD |
| ALPA | Alaska | 65 14 | 00.0 N | 626 | None | 31300 |
| | | 147 44 | 36.0 W | | | |
| CPSO | McMinnville, Tennessee | 35 35 | 41.4 N | 574 | 6480 V | SL210 V |
| | | 085 34 | 13.5 W | | 7515 H | SL220 H |
| FN-WV | Franklin, West Virginia | 38 32 | 58.0 N | 910 | KS36000 | KS36000 |
| | | 079 30 | 47.0 W | | | |
| LASA | Billings, Montana | 46 41 | 19.0 N | 744 | HS10 | 7505A V |
| | | 106 13 | 20.0 W | | | 8700C H |
| HN-ME | Houlton, Maine | 46 09 | 43.0 N | 213 | 18300 | SL210 V |
| | | 067 59 | 09.0 W | | | SL220 H |
| NORSAR | Kjeller, Norway | 60 49 | 25.4 N | 379 | HS10 | 7505A V |
| | | 010 49 | 56.5 E | | | 8700C H |
| RK-ON | Red Lake, Ontario | 50 50 | 20.0 N | 366 | 18300 | SL210 V |
| | | 093 40 | 20.0 W | | | SL220 H |
| WH2YK | White Horse, Yukon | 60 41 | 41.0 N | 853 | 18300 | SL210 V |
| | | 134 58 | 02.0 W | | | SL220 H |

Note: The orientation of the radial instruments at FN-WV is assumed to be 316° + 5° based on empirical data (event recordings). Rotation, where performed, is referenced to this azimuth and may be questionable.

27 OCT 75

T R I X

| STATION | YR | DOY | ARR | TIME |
|---------|----|-----|------|------|
| HN-ME | 75 | 300 | 1 13 | 2.5 |
| NAO | 75 | 300 | 1 8 | 47.7 |
| LD2 | 75 | 300 | 1 13 | 8.0 |

| YR | DOY | G-TIME | LAT | LONG |
|----|-----|----------|---------|---------|
| 75 | 300 | 1 2 25.9 | 68.199N | 86.683E |
| 75 | 300 | 1 0 5.2 | 42.491N | 88.472E |

T R I X

DATA SUMMARY

27 OCT 75

| S a. | Phase | Arrival Time | Inst. | Per | A/T | Magnitude* | | Dist.** |
|-------|-------|--------------|-------|-----|-----|------------|-------|---------|
| | | | | | | m_b | M_s | |
| NAO | EP | 01:08:47.7 | AB | 0.5 | 6. | 4.37 | -- | 48.1 |
| HN-ME | EP | 01:13:02.5 | SPZ | 0.5 | 20. | 5.02 | -- | 88.3 |
| LD2 | EP | 01:13:08.0 | AB | 1.1 | 43. | 5.33 | -- | 90.0 |

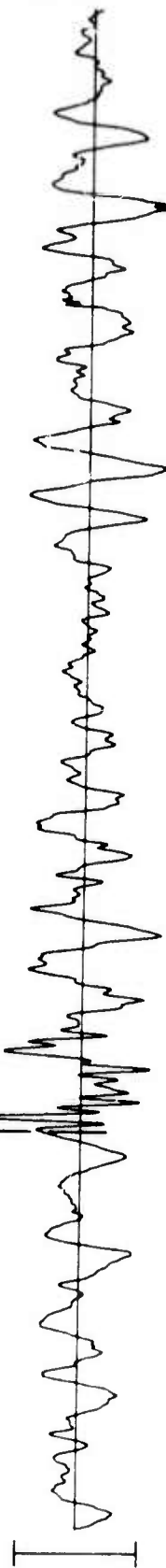
Average m_b = 4.91

- * For event source at surface
- ** Distances are calculated to TRIX epicenter

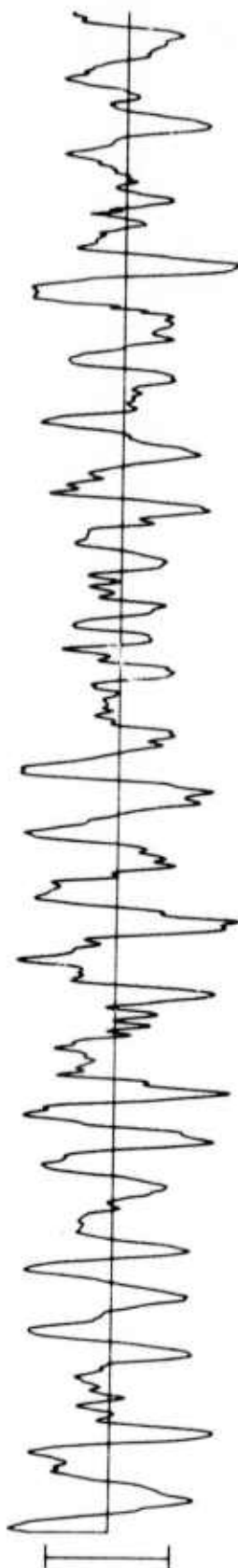
HN-ME 27 OCT 75

01:13:02.5

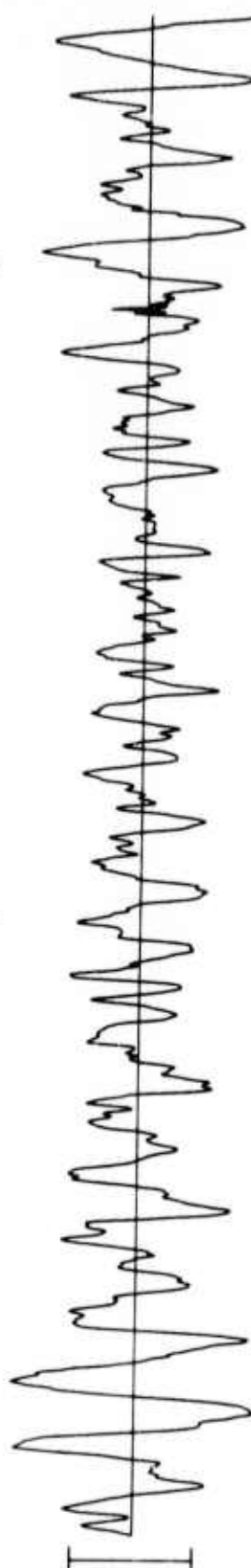
SPZ
29.66 MP



SPR
18.88 MP



SPT
17.73 MP

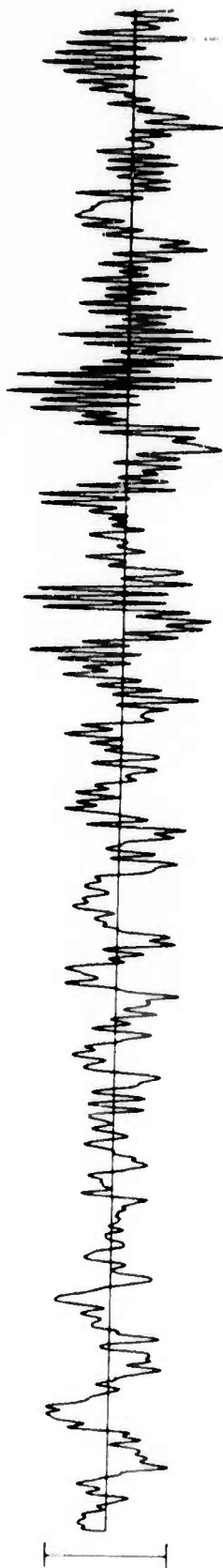


TIME

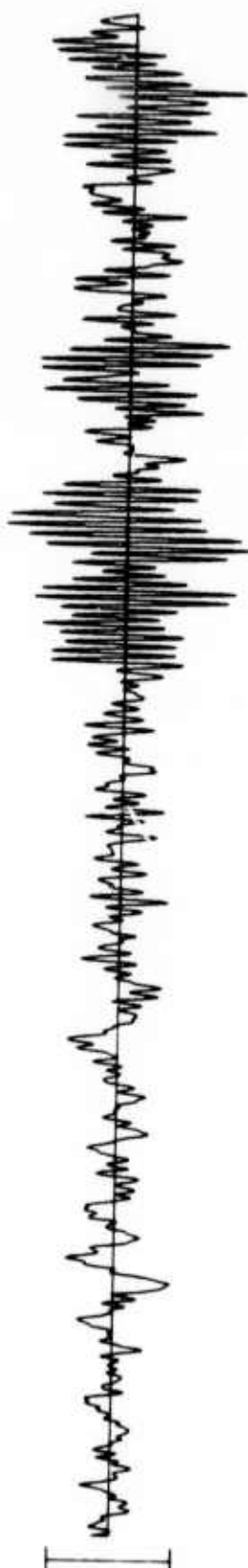


WH2YK 27 OCT 75

SPZ
13.20 MHz



SPR
18.17 MHz



SPT
16.34 MHz

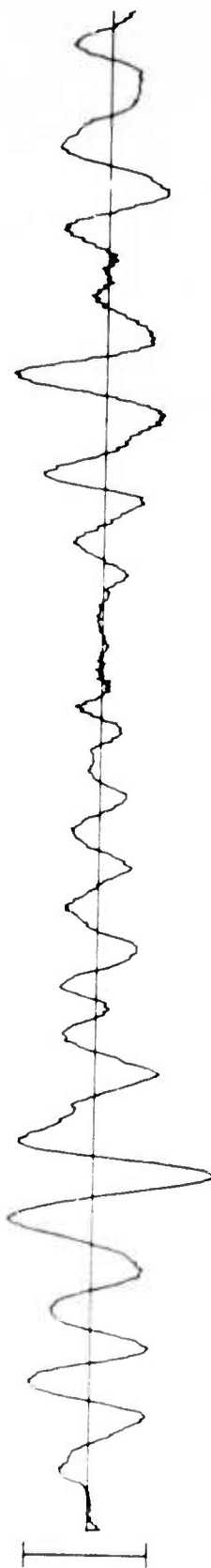


01:11:08.7

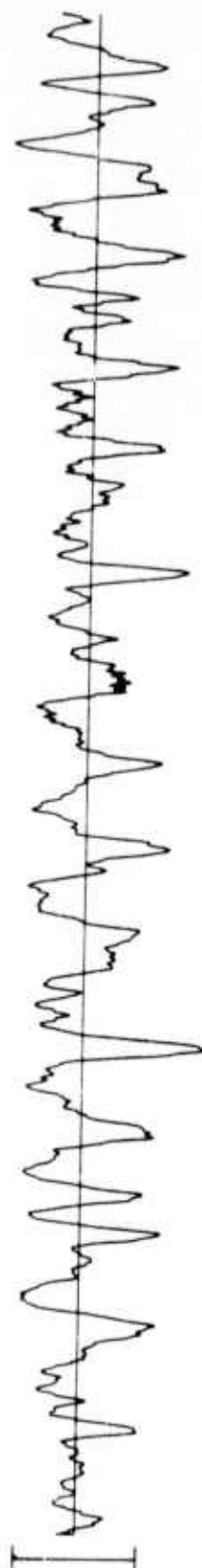
10 SEC

CPSO 27 OCT 75

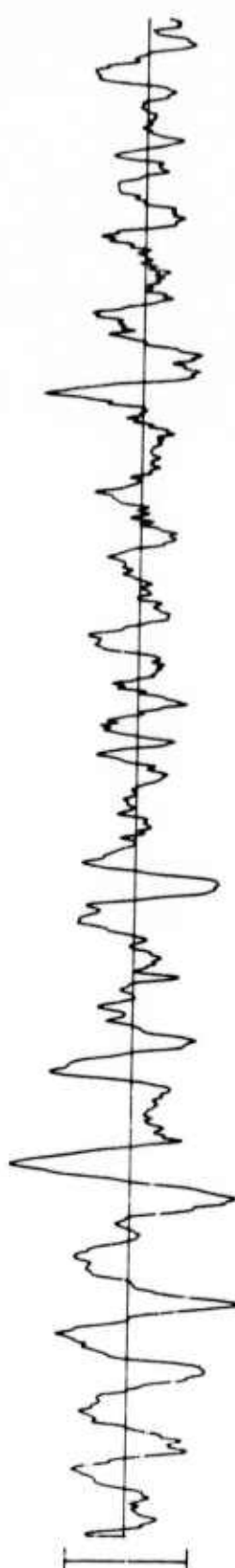
SPZ
51.26 Mμ



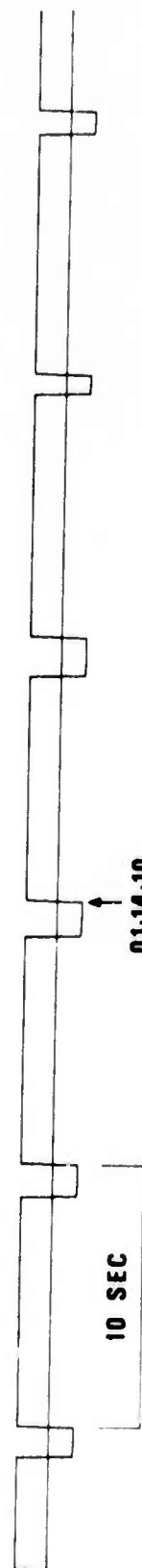
SPR
12.30 Mμ



SPT
11.25 Mμ



TIME



10 SEC

01:14:10

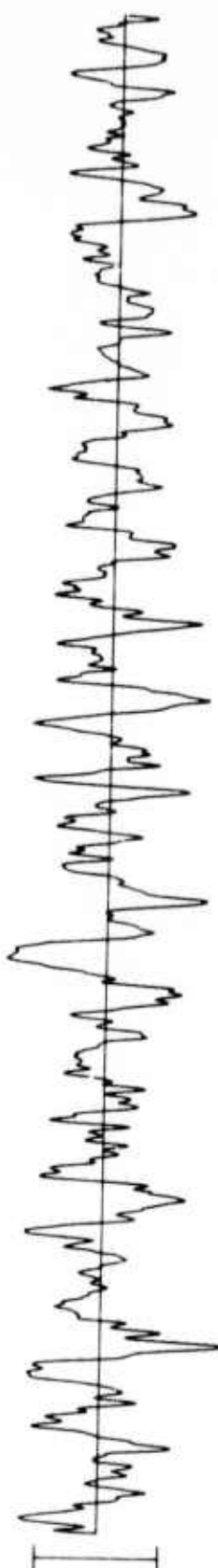
7<

RK-ON 27 OCT 75

SPZ
16.74 Mμ



SPR
14.32 Mμ



SPT
INOPERATIVE



TIME

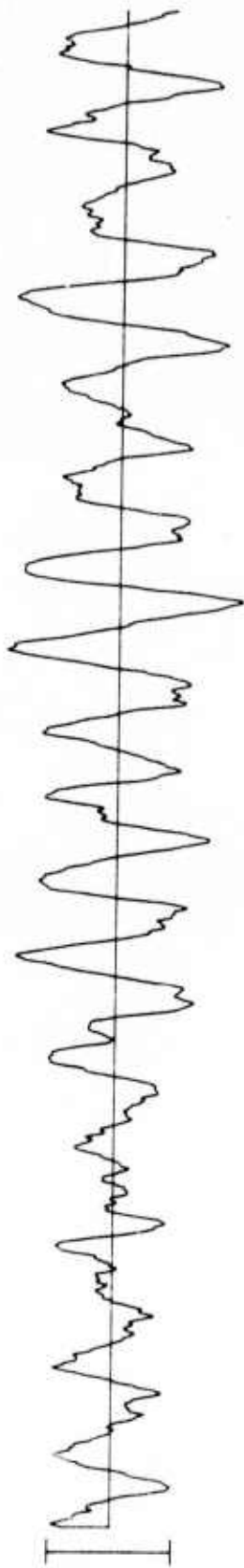


10 SEC

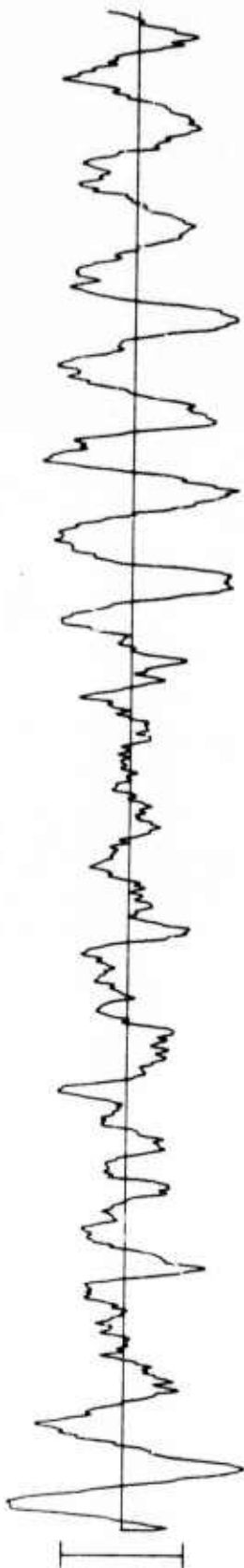
01:13:00

FN-WV 27 OCT 75

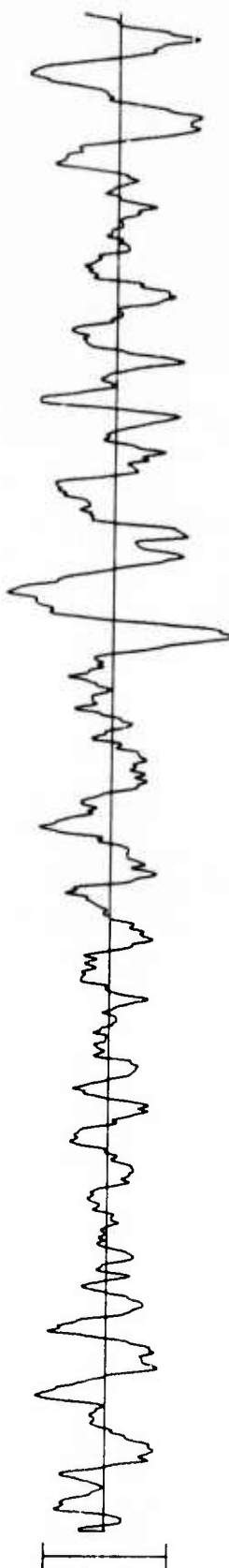
SPZ
16.59 Mμ



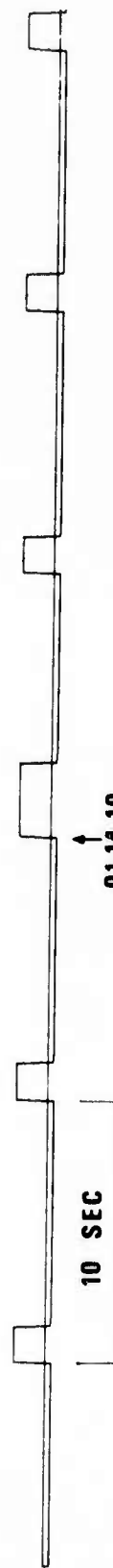
SPR
13.15 Mμ



SPT
12.85 Mμ



TIME



01:14:10

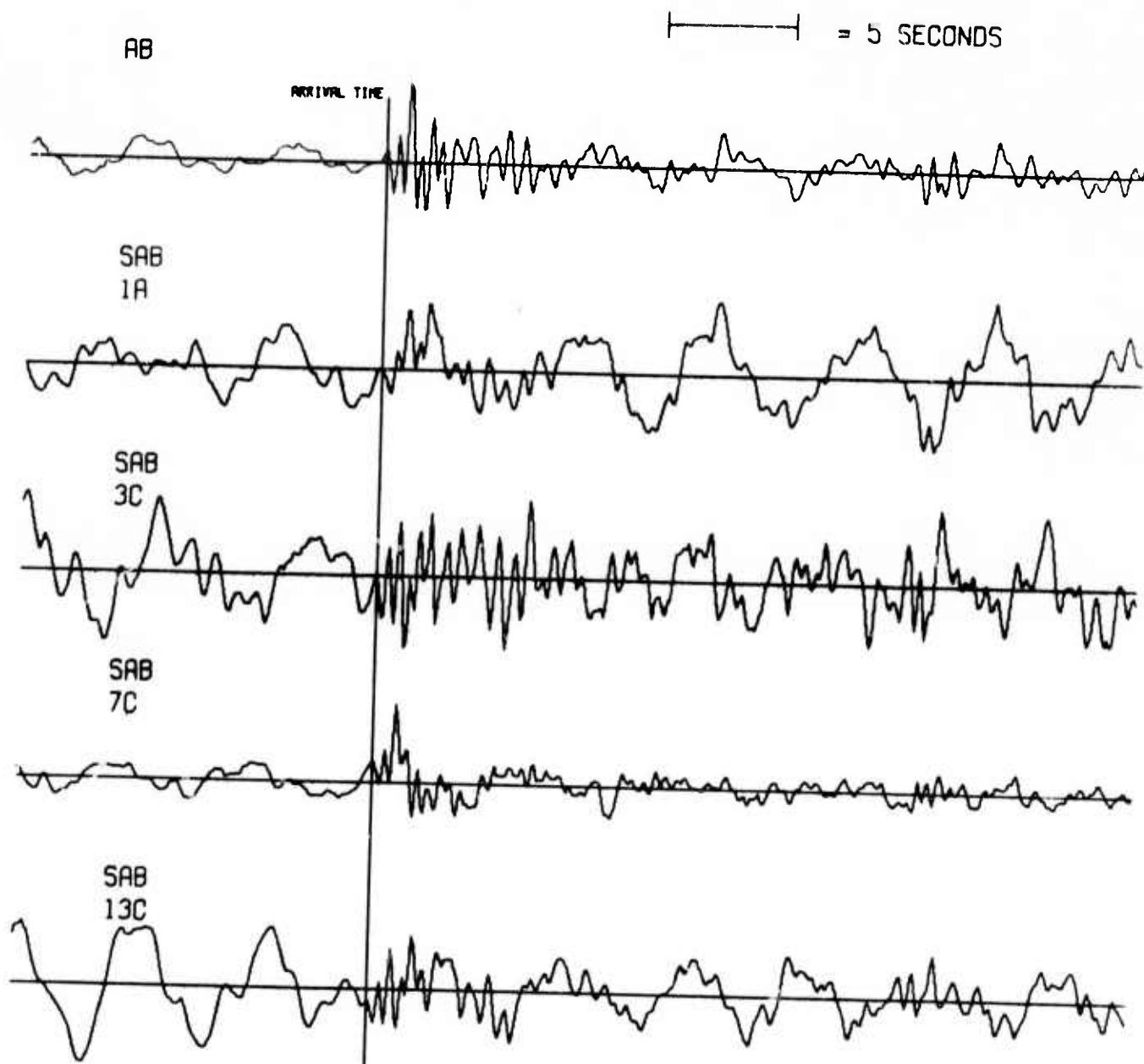
9<

NORSAR EVENT FILE

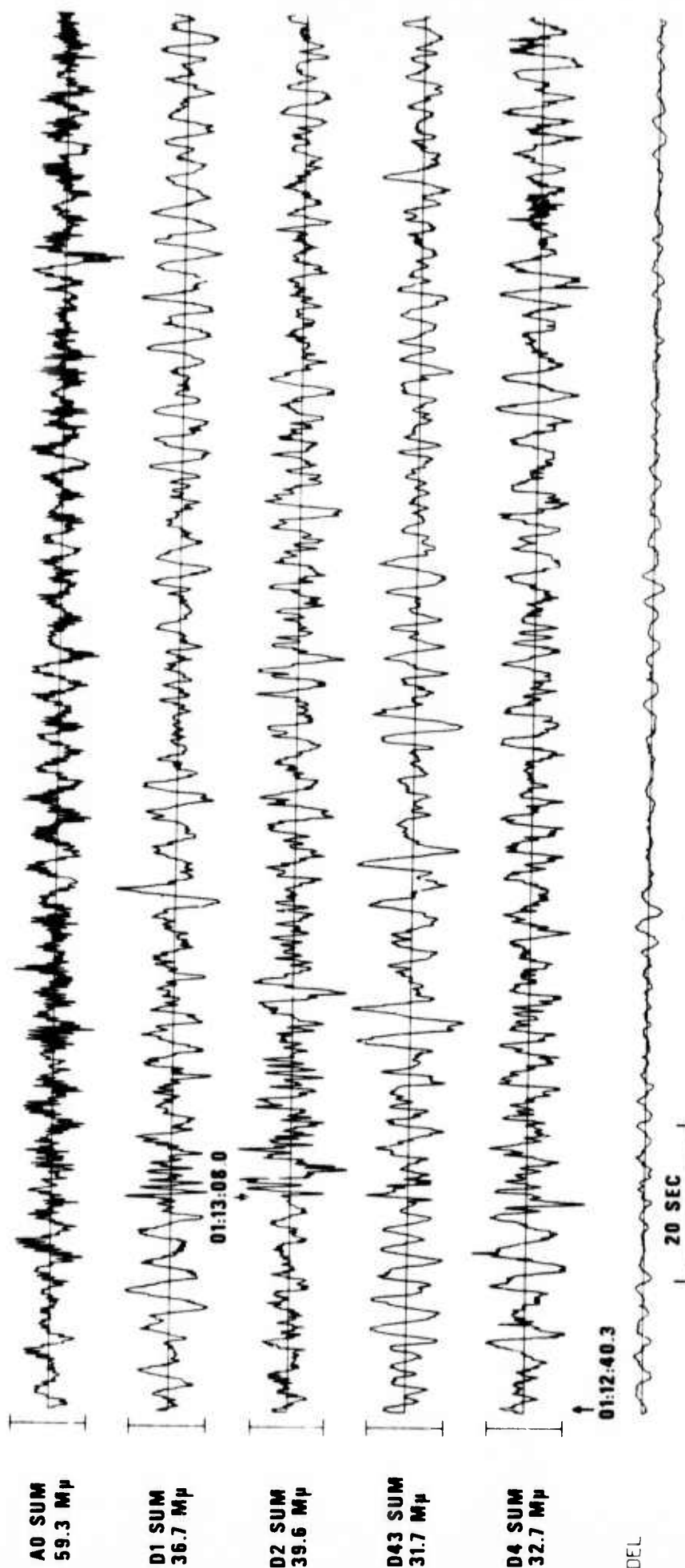
27 OCT 75

EPX NO. 47500 ARR. 1.8.47.8 40.7N 86.9E 4.5Mb 33KM

DIST = 50.0 AZI = 76.3 AMP = 2.8 PER = 0.4

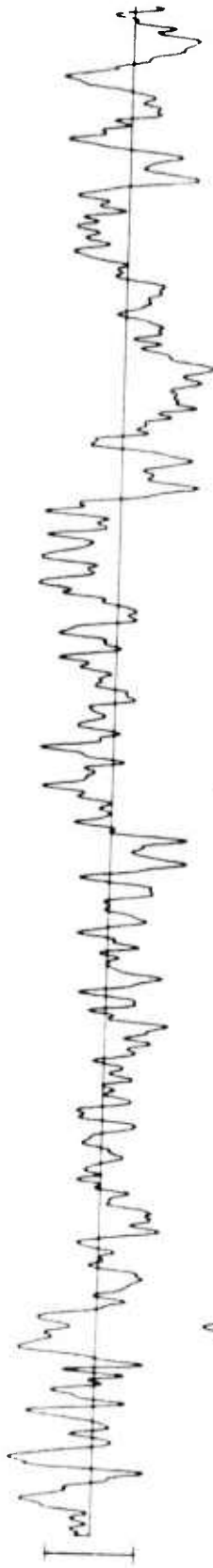


LASA INFINITE VELOCITY SUBARRAY SUMS 27 OCT 75



WH2YK 27 OCT 75

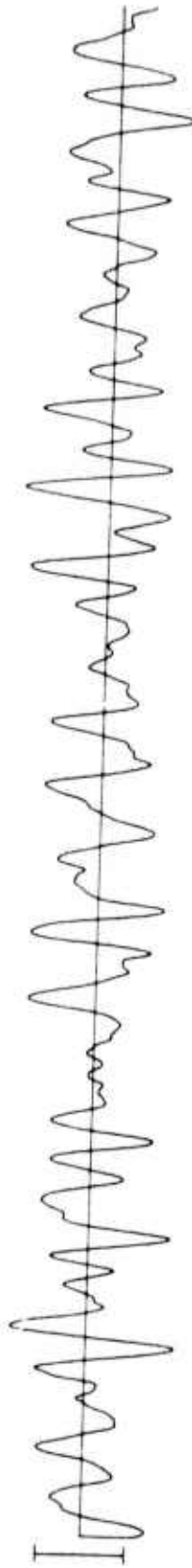
LPZ
96.61 MHz



LPR
459.66 MHz



LPT
512.11 MHz



TIME

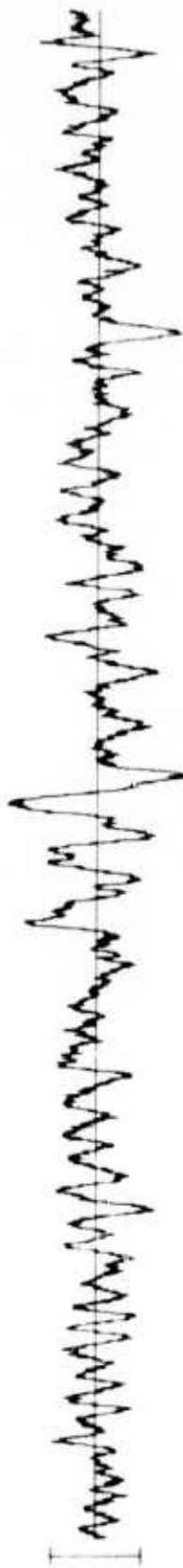


CPSO 27 OCT 75

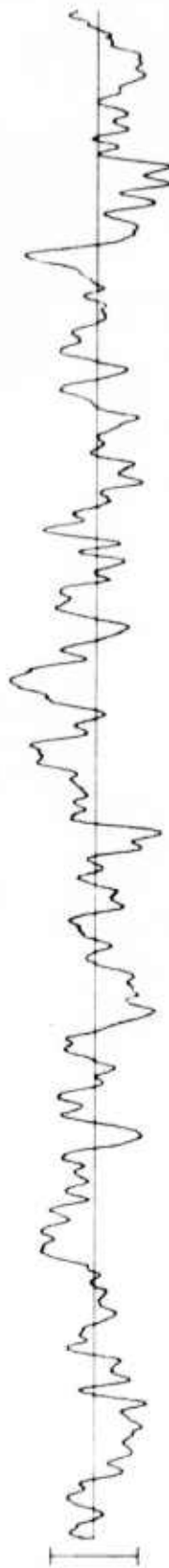
LPZ
204.28 Mμ



LPR
76.12 Mμ



LPT
173.70 Mμ



TIME



2 MIN

02:00:00

HN-ME 27 OCT 75

LPZ
1015.79 MHz



LPR
UNKNOWN



LPT
4411.25 MHz

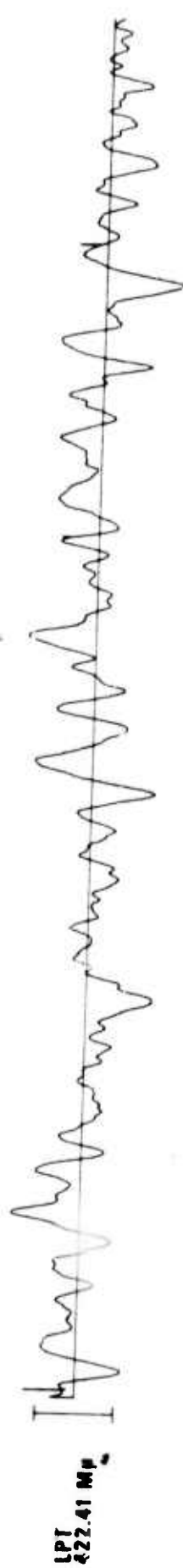
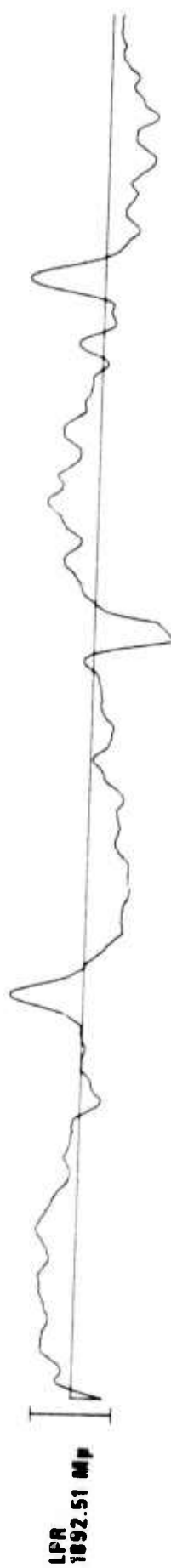


TIME



*INVALID CALIBRATION

RK-ON 27 OCT 75



FN-WV 27 OCT 75

LPZ
857.90 Mμ



LPR
97.55 Mμ



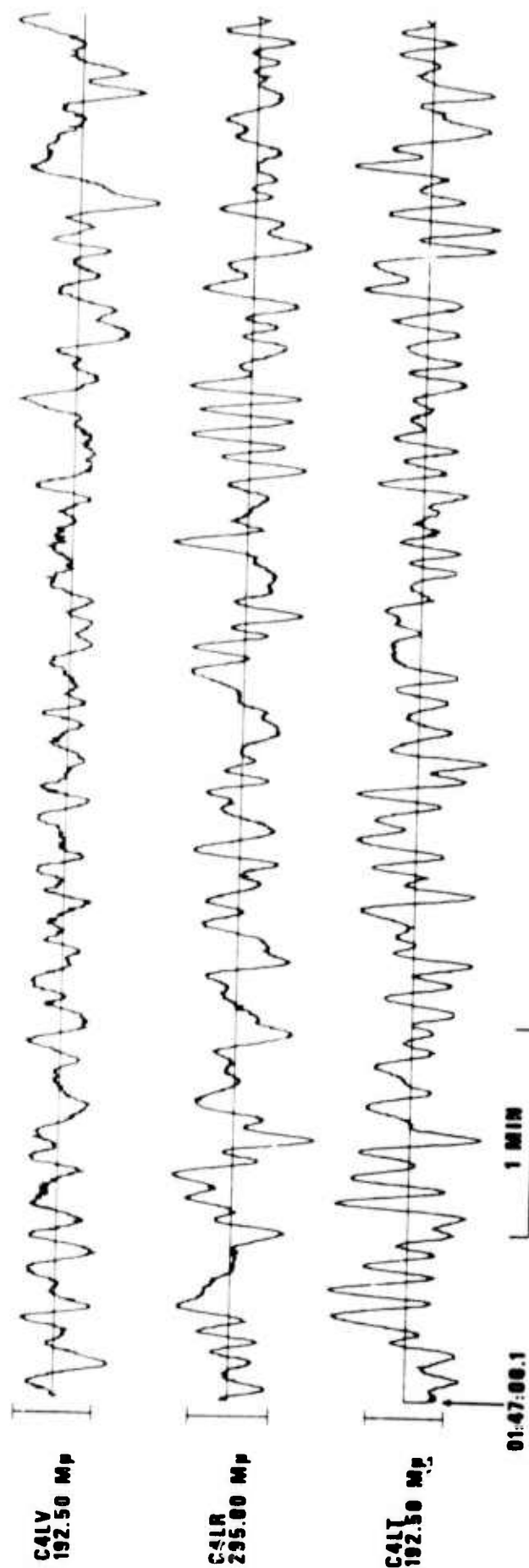
LPT
257.10 Mμ



TIME



LASA LONG PERIOD C4 SUBARRAY 27 OCT 75

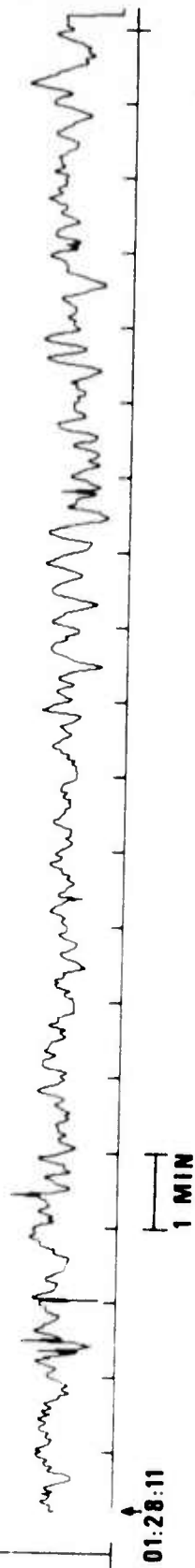


ARRAY LONG PERIOD VERTICAL BEAMS 27 OCT 75

ALPA

LP VERTICAL

18.63 M μ



NORSAR

LP VERTICAL

56.53 M μ

